IN THE CLAIMS:

Please cancel Claims 10-13 and 19-22 as set forth below.

1. (Original) A method of determining the presence of staphylococcal enterotoxin A gene in a sample, comprising:

contacting nucleic acid present in a sample suspected of encoding staphylococcal enterotoxin A, said nucleic acid including a target nucleic acid sequence, with a nucleic acid probe capable of selectively hybridizing to at least a portion of the target nucleic acid sequence; and

detecting the presence of the nucleic acid encoding staphylococcal enterotoxin A as a consequence of the selective hybridization of the nucleic acid probe to the target nucleic acid sequence.

2. (Original) The method of claim 1 further comprising amplifying the target nucleic acid sequence.

3. (Original) The method of claim 1 wherein the nucleic acid probe comprises a nucleic acid sequence selected from the group consisting of [SEQ ID NO: 1] and [SEQ ID NO: 2] and combinations thereof.

4. (Original) The method of claim 1 further comprising hybridizing the nucleic acid probe with the target nucleic acid sequence of the nucleic acid encoding staphylococcal enterotoxin A.

5. (Original) The method of claim 1 wherein the nucleic acid probe is a reporter-quencher nucleic acid probe specific for the target nucleic acid sequence of the nucleic acid encoding staphylococcal enterotoxin A.

6. (Original) The method of claim 5 further comprising measuring the level of fluorescence in the sample, wherein the level of fluorescence is quantitatively and qualitatively correlated to an amount of the nucleic acid encoding staphylococcal enterotoxin A in the sample.

7. (Original) The method of claim 6 wherein the reporter-quencher comprises a reporter attached to the 5' end of the nucleic acid probe and a quencher attached to the 3' end of the nucleic acid probe.

8. (Original) The method of claim 7 wherein the reporter is selected from the group consisting of 1-dimethylaminonaphthyl-5 sulfonate, 1-anilino-8-naphthalene sulfonate, 2-p-touidinyl-6-naphthalene sulfonate, 3-phenyl-7-isocyanatocoumarin, 9-isothiocyanatocacridine, N-(p-(2-benzoxazolyl)phenyl)maleimide, benzoxadiazoles, stilbenes, pyrenes, 6-carboxyfluorescein, tetrachloro-6-carboxyfluorescein, 2,7-dimethoxy-4,5-dichloro-6-carboxyfluorescein, hexachloro-6-carboxyfluorescein, 5-carboxyfluorescein, 6-carboxy-2',4,7,7'-tetrachlorofluorescein, carboxy-X-rhodamine and 6-carboxy-4',5'-dichloro-2',7'-dimethoxyfluorescein.

9. (Original) The method of claim 7 wherein the quencher is selected from the group consisting of 6-carboxytetramethylrhodamine, tetramethylrhodamine and 4-(4-dimethylaminophenylazo)benzoic acid.

Claims 10-13 (Canceled)

14. (Original) A method of determining the presence of staphylococcal enterotoxin A gene in a sample, comprising:

a) contacting nucleic acid present in a sample suspected of encoding staphylococcal enterotoxin A, said nucleic acid including a target nucleic acid sequence, with a mixture comprising:

i) a primer capable of selectively hybridizing to an initiation site operatively associated with the target nucleic acid sequence wherein the primer hybridized to the initiation site provides a starting point from which replication of the target nucleic acid sequence may take place;

ii) a primer extending agent operatively associated with the primer to catalyze the elongation of primer through replication of the target nucleic acid sequence;

iii) a plurality of free nucleotides employed by the primer extending agent to elongate the primer;

iv) a probe capable of selectively hybridizing to at least a portion of the target nucleic acid sequence, said probe including a label which when hybridized to the target nucleic acid sequence does not emit a signal, but when the probe is cleaved and

displaced therefrom by the elongation of the corresponding primer, emits a detectable signal; and

b) detecting the presence of the detectable signal emitted by the label, thereby detecting the nucleic acid encoding staphylococcal enterotoxin A in the sample.

15. (Original) A method of determining the presence of staphylococcal enterotoxin A gene in a sample, comprising:

contacting a target nucleic acid sequence forming at least a portion of a nucleic acid encoding staphylococcal enterotoxin A, with polymerase chain reaction reagents specific for the target nucleic acid sequence, the polymerase chain reaction reagents including a primer selected from the group consisting of a forward primer having a specific sequence selected from the group consisting of [SEQ ID NO:3], [SEQ ID NO: 4] and combinations thereof, and a reverse primer having a specific sequence selected from the group consisting of [SEQ ID NO: 5], [SEQ ID NO: 6] and combinations thereof, a polymerase enzyme, and a nucleic acid probe, wherein the nucleic acid probe further comprises:

a nucleic acid sequence that hybridizes to a portion of the target nucleic acid sequence wherein the portion is unique to the nucleic acid encoding staphylococcal enterotoxin A;

a reporter attached to a 5' end of the nucleic acid probe, said reporter capable of emitting a detectable signal;

a quencher attached to a 3' end of the nucleic acid probe capable of substantially quenching the reporter and prevent emission of the detectable signal, when the nucleic acid probe is intact, wherein the reporter becomes substantially

unquenched when the nucleic acid probe is cleaved by the polymerase enzyme during amplification of the target nucleic acid sequence;

amplifying the target nucleic acid sequence by thermal cycling, wherein the thermal cycling is sufficient to amplify the target nucleic acid sequence; and

measuring the level of fluorescence in the sample subsequent to thermal cycling, and further wherein the level of detectable signal is correlated to an amount of the nucleic acid encoding staphylococcal enterotoxin A in the sample, thereby quantitatively detecting the nucleic acid encoding staphylococcal enterotoxin A in the sample.

16. (Original) The method of claim 15 wherein the nucleic acid sequence of the nucleic acid probe is selected from the group consisting of [SEQ ID NO:1], [SEQ ID NO:2] and combinations thereof

17. (Original) A method of determining the presence of staphylococcal enterotoxin A gene in a sample, comprising:

amplifying a target nucleic acid sequence forming at least a portion of a nucleic acid encoding staphylococcal enterotoxin A in the sample using a forward primer having a specific sequence selected from the group consisting [SEQ ID NO: 3], [SEQ ID NO:4] and combinations thereof, and a corresponding reverse primer having a specific sequence selected from the group consisting [SEQ ID NO: 3], [SEQ ID NO: 4] and combinations thereof; and

detecting the amplified target nucleic acid sequence formed, thereby detecting the nucleic acid encoding staphylococcal enterotoxin A in the sample.

18. (Original) The method of claim 17 further comprising detecting the amplified target nucleic acid using a nucleic acid probe having a nucleic acid sequence selected from the group consisting of [SEQ ID NO: 1], [SEQ ID NO: 2] and combinations thereof.

Claims 19-22 (Canceled)